

```
=> fil reg
FILE 'REGISTRY' ENTERED AT 10:31:45 ON 04 MAR 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 American Chemical Society (ACS)
```

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

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STRUCTURE FILE UPDATES:    3 MAR 2008  HIGHEST RN 1006431-93-1
DICTIONARY FILE UPDATES:   3 MAR 2008  HIGHEST RN 1006431-93-1
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New CAS Information Use Policies, enter HELP USAGETERMS for details.

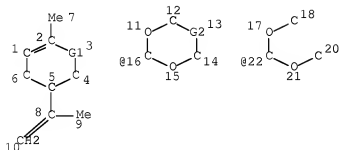
TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

```
=> d sta que l11
L9          STR
```



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VAR G1=16/22
REP G2=(0-2) C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
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GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 21
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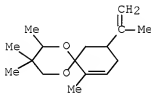
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STEREO ATTRIBUTES: NONE
L11          16 SEA FILE=REGISTRY SSS FUL L9
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100.0% PROCESSED    33 ITERATIONS
SEARCH TIME: 00.00.01
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16 ANSWERS

=> d ide can tot l14

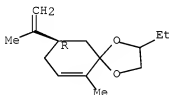
L14 ANSWER 1 OF 11 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 1005242-49-8 REGISTRY  
 ED Entered STN: 24 Feb 2008  
 CN 1,5-Dioxaspiro[5.5]undec-7-ene, 2,3,3,7-tetramethyl-10-(1-methylethenyl)-  
 (CA INDEX NAME)  
 MF C16 H26 O2  
 SR Other Sources  
 Database: ChemBank (The Broad Institute)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L14 ANSWER 2 OF 11 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 559719-50-3 REGISTRY  
 ED Entered STN: 08 Mar 2004  
 CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2-ethyl-6-methyl-9-(1-methylethenyl)-, (9R)-  
 (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C14 H22 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, CHEMCATS, USPATFULL

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

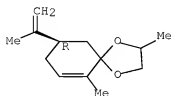
1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:187015

L14 ANSWER 3 OF 11 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 559719-49-0 REGISTRY  
 ED Entered STN: 08 Mar 2004  
 CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2,6-dimethyl-9-(1-methylethenyl)-, (9R)-

(CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C13 H20 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



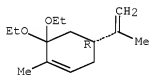
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:187015

L14 ANSWER 4 OF 11 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 659719-48-9 REGISTRY  
 ED Entered STN: 08 Mar 2004  
 CN Cyclohexene, 6,6-diethoxy-1-methyl-4-(1-methylethenyl)-, (4R)- (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C14 H24 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry. Rotation (-).



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

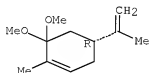
1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:187015

L14 ANSWER 5 OF 11 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 659719-47-9 REGISTRY  
 ED Entered STN: 08 Mar 2004  
 CN Cyclohexene, 6,6-dimethoxy-1-methyl-4-(1-methylethenyl)-, (4R)- (CA INDEX NAME)  
 FS STEREOSEARCH

MF C12 H20 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry. Rotation (-).

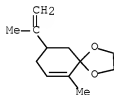


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:187015

L14 ANSWER 6 OF 11 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 257630-48-1 REGISTRY  
 ED Entered STN: 01 Mar 2000  
 CN 1,4-Dioxaspiro[4.5]dec-6-ene, 6-methyl-9-(1-methylethenyl)- (CA INDEX NAME)  
 MF C12 H18 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, CASREACT



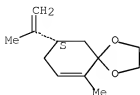
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:151712

L14 ANSWER 7 OF 11 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 183053-93-2 REGISTRY  
 ED Entered STN: 14 Nov 1996  
 CN 1,4-Dioxaspiro[4.5]dec-6-ene, 6-methyl-9-(1-methylethenyl)-, (S)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C12 H18 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 125:329056

L14 ANSWER 8 OF 11 REGISTRY COPYRIGHT 2008 ACS on STN

RN 124413-99-6 REGISTRY

ED Entered STN: 22 Dec 1989

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 6-methyl-9-(1-methylethenyl)-, (9R)- (CA  
INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 6-methyl-9-(1-methylethenyl)-, (R)-

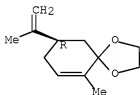
FS STEREOSEARCH

MF C12 H18 O2

SR CA

LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT, USPATFULL  
(\*File contains numerically searchable property data)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:187015

REFERENCE 2: 114:100665

REFERENCE 3: 112:35000

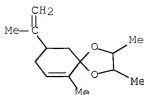
L14 ANSWER 9 OF 11 REGISTRY COPYRIGHT 2008 ACS on STN

RN 116562-27-7 REGISTRY

ED Entered STN: 25 Sep 1988

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2,3,6-trimethyl-9-(1-methylethenyl)-,

[2R-[2 $\alpha$ ,3 $\beta$ ,5 $\alpha$ (S\*)]]- (9CI) (CA INDEX NAME)  
 MF C14 H22 O2  
 SR CA  
 LC STN Files: CA, CAPLUS

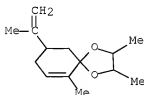


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1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 109:211235

L14 ANSWER 10 OF 11 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 116562-26-6 REGISTRY  
 ED Entered STN: 25 Sep 1988  
 CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2,3,6-trimethyl-9-(1-methylethenyl)-,  
 [2R-[2 $\alpha$ ,3 $\beta$ ,5 $\alpha$ (R\*)]]- (9CI) (CA INDEX NAME)  
 MF C14 H22 O2  
 SR CA  
 LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

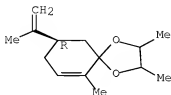
1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 109:211235

L14 ANSWER 11 OF 11 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 33496-33-4 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2,3,6-trimethyl-9-(1-methylethenyl)-, (9R)-  
 (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2,3,6-trimethyl-9-(1-methylethenyl)-, (R)-  
 CN 1,4-Dioxaspiro[4.5]dec-6-ene, 9-isopropenyl-2,3,6-trimethyl-, (-)- (8CI)  
 OTHER NAMES:

CN (-)-Carvone-2,3-butylene glycol acetal  
 FS STEREOSEARCH  
 MF C14 H22 O2  
 LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:187015

REFERENCE 2: 75:5091

=> fil uspatful

FILE 'USPATFULL' ENTERED AT 10:32:02 ON 04 MAR 2008

CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 4 Mar 2008 (20080304/PD)

FILE LAST UPDATED: 4 Mar 2008 (20080304/ED)

HIGHEST GRANTED PATENT NUMBER: US7340778

HIGHEST APPLICATION PUBLICATION NUMBER: US2008052798

CA INDEXING IS CURRENT THROUGH 4 Mar 2008 (20080304/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 4 Mar 2008 (20080304/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Dec 2007

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Dec 2007

=> d bib abs hitstr 120

L20 ANSWER 1 OF 1 USPATFULL on STN

AN 2005:280618 USPATFULL [Full-text](#)

TI Carvone acetals used as flavourings

IN Surburg, Horst, MEIERBERG 9, HOLMINDEN, GERMANY, FEDERAL REPUBLIC OF  
 37603

Loges, Hubert, Hoxter, GERMANY, FEDERAL REPUBLIC OF

Machinek, Arnold, Holzminden, GERMANY, FEDERAL REPUBLIC OF

PI US 2005244561 A1 20051103

AI US 2003-521210 A1 20030802 (10)

WO 2003-EP8591

20030802  
 20050113 PCT 371 date

DT Utility

FS APPLICATION

LREP ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P., 1300 19TH STREET, N.W., SUITE  
 600, WASHINGTON, DC, 20036, US

CLMN Number of Claims: 11

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 499

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to (-)-carvone acetals and their use as flavourings.  
In a preferred embodiment, the invention relates to the use of these acetals  
for the flavouring of oral hygiene products.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 33496-93-4P, (-)-Carvone-2,3-butylene glycol acetal

124413-99-6P 659719-47-8P 659719-48-9P

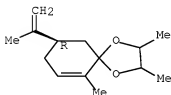
659719-49-0P 659719-50-3P

(carvone acetals as aroma compds. for food and cosmetic and  
pharmaceutical use)

RN 33496-93-4 USPATFULL

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2,3,6-trimethyl-9-(1-methylethenyl)-, (9R)-  
(CA INDEX NAME)

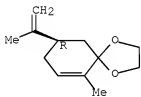
Absolute stereochemistry.



RN 124413-99-6 USPATFULL

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 6-methyl-9-(1-methylethenyl)-, (9R)- (CA  
INDEX NAME)

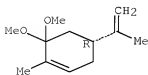
Absolute stereochemistry.



RN 659719-47-8 USPATFULL

CN Cyclohexene, 6,6-dimethoxy-1-methyl-4-(1-methylethenyl)-, (4R)- (CA INDEX  
NAME)

Absolute stereochemistry. Rotation (-).

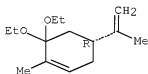




RN 659719-48-9 USPATFULL

CN Cyclohexene, 6,6-diethoxy-1-methyl-4-(1-methylethenyl)-, (4R)- (CA INDEX NAME)

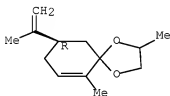
Absolute stereochemistry. Rotation (-).



RN 659719-49-0 USPATFULL

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2,6-dimethyl-9-(1-methylethenyl)-, (9R)- (CA INDEX NAME)

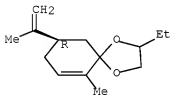
Absolute stereochemistry.



RN 659719-50-3 USPATFULL

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2-ethyl-6-methyl-9-(1-methylethenyl)-, (9R)- (CA INDEX NAME)

Absolute stereochemistry.



=&gt; fil hcaplus

FILE 'HCAPLUS' ENTERED AT 10:32:18 ON 04 MAR 2008

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FILE COVERS 1907 - 4 Mar 2008 VOL 148 ISS 10  
FILE LAST UPDATED: 3 Mar 2008 (20080303/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d bib abs hitstr retable tot l19

L19 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2004:138674 HCAPLUS Full-text

DN 140:187015

TI Carvone acetals as aroma compounds for food and cosmetic and pharmaceutical use

IN Surburg, Horst; Logez, Hubert; Machinsk, Arnold

PA Symrise GmbH & Co. KG, Germany

SO Ger. Offen., 7 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10235968	A1	20040219	DE 2002-10235968	20020806 <--
	WO 2004015044	A1	20040219	WO 2003-EP8591	20030802 <--
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2003251687	A1	20040225	AU 2003-251687	20030802 <--
	EP 1529095	A1	20050511	EP 2003-784158	20030802 <--
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
	US 2005244561	A1	20051103	US 2005-521210	20050113 <--
PRAI	DE 2002-10235968	A	20020806	<--	
	WO 2003-EP8591	W	20030802	<--	

OS MARPAT 140:187015

AB The invention concerns (-)-carvone acetals and their use as aroma compds. In a preferential embodiment the invention concerns the use of these acetals for aromatization of oral hygiene products.

IT 33496-93-4P, (-)-Carvone-2,3-butylene glycol acetal

124413-39-6P 659719-47-8P 659719-48-9P

659719-49-0P 659719-50-3P

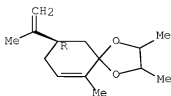
RL: COS (Cosmetic use); FFD (Food or feed use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(carvone acetals as aroma compds. for food and cosmetic and pharmaceutical use)

RN 33496-93-4 HCAPLUS

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2,3,6-trimethyl-9-(1-methylethenyl)-, (9R)-  
(CA INDEX NAME)

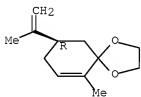
Absolute stereochemistry.



RN 124413-99-6 HCAPLUS

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 6-methyl-9-(1-methylethenyl)-, (9R)-  
(CA INDEX NAME)

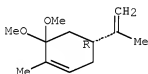
Absolute stereochemistry.



RN 659719-47-8 HCAPLUS

CN Cyclohexene, 6,6-dimethoxy-1-methyl-4-(1-methylethenyl)-, (4R)-  
(CA INDEX NAME)

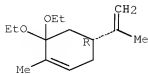
Absolute stereochemistry. Rotation (-).



RN 659719-48-9 HCAPLUS

CN Cyclohexene, 6,6-diethoxy-1-methyl-4-(1-methylethenyl)-, (4R)-  
(CA INDEX NAME)

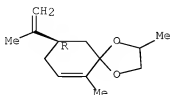
Absolute stereochemistry. Rotation (-).



RN 659719-49-0 HCAPLUS

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2,6-dimethyl-9-(1-methylethenyl)-, (9R)-  
(CA INDEX NAME)

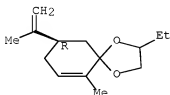
Absolute stereochemistry.



RN 659719-50-3 HCAPLUS

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2-ethyl-6-methyl-9-(1-methylethenyl)-, (9R)-  
(CA INDEX NAME)

Absolute stereochemistry.



L19 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 1999:805718 HCAPLUS [Full-text](#)

DN 132:151712

TI Cadmium iodide catalyzed and efficient synthesis of acetals under microwave irradiations

AU Laskar, Dhrubojyoti Dey; Prajapati, Dipak; Sandhu, Jagir S.

CS Regional Research Laboratory, Jorhat, 785 006, India

SO Chemistry Letters (1999), (12), 1283-1284

CODEN: CMLTAG; ISSN: 0366-7022

PB Chemical Society of Japan

DT Journal

LA English

OS CASREACT 132:151712

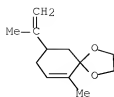
AB A new selective method of acetalization of aldehydes and ketones with 1,2-diols, 1,3-diols or alcs. mediated by Cd iodide under microwave irradiation is achieved in excellent yields.

IT 257630-48-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(cadmium iodide catalyzed synthesis of acetals under microwave irradiations)

RN 257630-48-1 HCAPLUS

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 6-methyl-9-(1-methylethenyl)- (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Baghurst, D	1992		1674	J Chem Soc, Chem Com	HCAPLUS
Baruah, B	1996		1351	Chem Lett	HCAPLUS
Baruah, B	1996	137	19087	Tetrahedron Lett	HCAPLUS
Baruah, B	1997	138	11449	Tetrahedron Lett	HCAPLUS
Bose, A	1991	156	16968	J Org Chem	HCAPLUS
Brown, J	1964	186	12183	J Am Chem Soc	HCAPLUS
Caddick, S	1995	151	110403	Tetrahedron	HCAPLUS
Chan, T	1983		1203	Synthesis	HCAPLUS
Cramarossa, M	1997	153	115889	Tetrahedron	HCAPLUS
Daniele, M	1990		1363	Main Group Met Chem	
Giguere, R	1989	11	1103	Organic Synthesis: T	HCAPLUS
Hanzlik, R	1978	143	1438	J Org Chem	HCAPLUS
Kim, S	1992	133	12565	Tetrahedron Lett	HCAPLUS
Kocienski, P	1994		1156	Protecting Groups, 1	
Lillie, B	1994	135	1969	Tetrahedron Lett	HCAPLUS
Lorette, N	1960	125	1521	J Org Chem	HCAPLUS
Lu, T	1995	160	12931	J Org Chem	HCAPLUS
Majdoub, M	1996	152	1617	Tetrahedron	HCAPLUS
Minafuji, M	1989			JP 01-313481	HCAPLUS
Mingos, D	1991	120	11	Chem Soc Rev	HCAPLUS
Smith, A	1991	1113	12071	J Am Chem Soc	HCAPLUS
Stenberg, V	1974	139	12815	J Org Chem	HCAPLUS
Thuy, V	1975	111	12558	Bull Soc Chim Fr	
Tsunoda, T	1980	121	11357	Tetrahedron Lett	HCAPLUS
Weinelt, F	1997			EP 737734	HCAPLUS

L19 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 1996:592479 HCAPLUS [Full-text](#)

DN 125:329056

TI Synthesis of physiologically active substances from several cyclic monoterpenyl ketones

AU Nomura, Masato; Hisatomi, Satoshi; Fujihara, Yoshihito; Shibata, Mitsunobu; Takagi, Shigeki; Sugiura, Masaaki

CS Department of Industrial Chemistry, Kinki University, Higashihiroshima, 739-21, Japan

SO Nihon Yukagakkaiishi (1996), 45(9), 865-870

CODEN: NIYUFC; ISSN: 1341-8327

PB Nihon Yukagaku Gakkai

DT Journal

LA Japanese

AB Synthesis of ketals of (+)-menthone, (+)-carvone, (-)-verbenone, (+)-camphor and karahanaenone by condensation reaction with ethylene glycol, 1,2-ethanedithiol or 1,3-propanedithiol in the presence of zeolites or p-toluene sulfonic acid was developed. (+)-Menthone propylene dithioketal, 2-[2-(1-methylethyl)-5-methylphenylthio]ethanethiol, which was derived from (-)-verbenone, and (+)-camphor propylene dithioketal emitted odors indicating

their potential use as flavor ingredients. (+)-Camphor ethylene dithioketal at 550 ppm completely inhibited the growth of *Propionibacterium acnes*. Ethylene and propylene dithioketals of (+)-camphor showed efficient insecticidal activity of 83.apprx.100% at 0.5.apprx.1.0 g/m2 toward *Tyrophagus putrescentiae* and *Dermatophgoides farinae* with their activity toward *T. putrescentiae* exceeding that of *N,N*-diethyl-*m*-toluamide (DEET).

IT 183053-93-2P

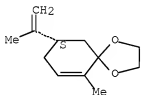
RL: SPN (Synthetic preparation); PREP (Preparation)

(synthesis of physiol. active ketals derived from several cyclic monoterpenyl ketones)

RN 183053-93-2 HCAPLUS

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 6-methyl-9-(1-methylethenyl)-, (S)- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.



L19 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2008 ACS ON STN

AN 1991:100665 HCAPLUS [Full-text](#)

DN 114:100665

TI Dimethyl sulfoxide-catalyzed hydrolysis of acetals or ketals to carbonyl compounds

IN Honda, Toshio; Kusano, Takashi; Ishisone, Hiroyuki; Suzuki, Yukio; Mori, Wakako

PA Horiuchi Itaro Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02218636	A	19900831	JP 1989-39442	19890221 <--
PRAI	JP 1989-39442		19890221	<--	

OS MARPAT 114:100665

AB R1R2CO (R1, R2 = H, alkyl, aryl; or R1R2 = alkylene) are prepared by thermal hydrolysis of R1CR2(OR3)OR4 (R1, R2 = defined above; R3, R4 = alkyl; or R3R4 = alkylene) in presence of H2O and at least a catalytic quantity of DMSO. The process allows to hydrolyze acetals and ketals, particularly hydroxy-containing acid sensitive ones, under neutral conditions and also selectively hydrolyze linear acetals in the presence of cyclic acetals. Thus, a solution of PhCMe(OMe)2 1, DMSO 5, and H2O 5 mmol in 4 mL dioxane was refluxed 1.5 h to give 93.3% PhC(OMe)Me.

IT 124413-99-6P

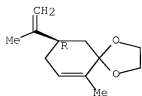
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and hydrolysis of, DMSO catalyst for)

RN 124413-99-6 HCAPLUS

CN 1,4-Dioxaspiro[4.5]dec-6-ene, 6-methyl-9-(1-methylethenyl)-, (9R)- (CA INDEX NAME)

Absolute stereochemistry.

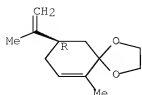


L19 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1990:35000 HCAPLUS [Full-text](#)  
 DN 112:35000  
 TI Simple and chemoselective deprotection of acetals using aqueous dimethyl sulfoxide  
 AU Kametani, Tetsuji; Kondoh, Hirotsune; Honda, Toshio; Ishizone, Hiroyuki; Suzuki, Yukio; Mori, Wakako  
 CS Inst. Med. Chem., Hoshi Univ., Tokyo, 142, Japan  
 SO Chemistry Letters (1989), (5), 901-4  
 CODEN: CMLTAG; ISSN: 0366-7022  
 DT Journal  
 LA English  
 OS CASREACT 112:35000  
 GI

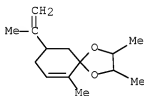


AB Deprotection of acetals was achieved in aqueous Me2SO under neutral reaction condition. Selective cleavage of acyclic acetals (e.g., I; R = Me3CSiMe2, tetrahydropyranyl) bearing various types of acid-labile protecting groups was also reported.  
 IT 124413-99-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (acetal cleavage of, with aqueous DMSO)  
 RN 124413-99-6 HCAPLUS  
 CN 1,4-Dioxaspiro[4.5]dec-6-ene, 6-methyl-9-(1-methylethenyl)-, (9R)- (CA INDEX NAME)

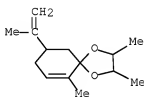
Absolute stereochemistry.



L19 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1988:611235 HCAPLUS [Full-text](#)  
 DN 109:211235  
 TI Resolution of monoterpenes enantiomers by gas chromatography  
 AU Satterwhite, D. Michael; Croteau, Rodney B.  
 CS Inst. Biol. Chem., Washington State Univ., Pullman, WA, 99164-6340, USA  
 SO Journal of Chromatography (1987), 407, 243-52  
 CODEN: JOCRAM; ISSN: 0021-9673  
 DT Journal  
 LA English  
 OS CASREACT 109:211235  
 AB Enantiomeric monoterpenes were resolved by gas chromatog. on conventional capillary and packed columns following conversion to diastereomeric ketals of (2R,3R)-2,3-butanediol. Efficient methods are described for the derivatization and separation of sub-milligram quantities of the enantiomers of  $\alpha$ -pinene,  $\beta$ -pinene, camphene, sabinene,  $\alpha$ -thujene, limonene and 3-carene, as well as of structurally related alcs. and ketones.  
 IT 116562-26-6P 116562-27-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and chromatog. separation of)  
 RN 116562-26-6 HCAPLUS  
 CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2,3,6-trimethyl-9-(1-methylethenyl)-, [2R-[2 $\alpha$ ,3 $\beta$ ,5 $\alpha$ (R\*)]]- (9CI) (CA INDEX NAME)



RN 116562-27-7 HCAPLUS  
 CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2,3,6-trimethyl-9-(1-methylethenyl)-, [2R-[2 $\alpha$ ,3 $\beta$ ,5 $\alpha$ (S\*)]]- (9CI) (CA INDEX NAME)

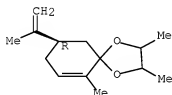


L19 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1971:405091 HCAPLUS [Full-text](#)  
 DN 75:5091  
 OREF 75:851a,854a  
 TI Resolution of racemic ketones and aldehydes via diastereoisomeric acetals by gas-liquid chromatography. II. Diastereoisomeric ketals with 2,3-butanediol  
 AU Sanz-Burata, Manuel; Irurre-Perez, Jose; Julia-Arechaga, Sebastian



CS Spain  
 SO Afinidad (1970), 27(281), 698-704  
 CODEN: AFINAE; ISSN: 0001-9704  
 DT Journal  
 LA Spanish  
 AB D-(-)-2,3-Butanediol was evaluated as a resolving agent via the formation of the diastereoisomeric ketals of the following ( $\pm$ )-ketones by gasliq. chromatog.: ( $\pm$ )-3-methylcyclohexanone (I), ( $\pm$ )-3,3,5-trimethylcyclohexanone (II), (-)-menthone (III), (-)-carvone, (+)-camphor (IV), ( $\pm$ )-5-methyl-3-heptanone, and ( $\pm$ )-2,6,8-trimethyl-4-nonanone. Only the resolution of I and II was successful. III and IV were effective resolving agents for ( $\pm$ )-2,3-butanediol. The best sepns. were obtained on a capillary column coated with diethylene glycol polyadipate. In addition, steric factors responsible for good gas-liquid chromatog. sepns. were studied, with consideration of the empirical Rule of Six formulated by Newman and of the degree of immobility of the conformation.  
 IT 33496-93-4F  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 33496-93-4 HCAPLUS  
 CN 1,4-Dioxaspiro[4.5]dec-6-ene, 2,3,6-trimethyl-9-(1-methylethenyl)-, (9R)-  
 (CA INDEX NAME)

Absolute stereochemistry.



=> d his

(FILE 'HOME' ENTERED AT 09:52:42 ON 04 MAR 2008)  
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 09:52:49 ON 04 MAR 2008

L1 1 S US20050244561/PN OR (US2005-521210# OR WO2003-EP8591)/AP,PRN  
 E SURBURG/AU  
 L2 77 S E4,E6  
 E LOGES/AU  
 L3 12 S E3,E18  
 E MACHINEK/AU  
 L4 19 S E4  
 E SYMRISE/CO  
 L5 296 S E3-E23/CO,A,CS  
 E E15+ALL  
 L6 1087 S E2+RT OR E2-E27/PA,CS  
 SEL RN L1

FILE 'REGISTRY' ENTERED AT 09:54:38 ON 04 MAR 2008

L7 12 S E1-E12  
 L8 6 S L7 AND (C14H22O2 OR C13H20O2 OR C14H22O2 OR C12H18O2 OR C12H2  
 L9 STR

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L10      1 S L9
L11      16 S L9 FUL
          SAV L11 DEES521/A
L12      10 S L11 NOT L8
L13      5 S L12 AND (C12H18O2 OR C14H22O2 OR C16H26O2)
L14      11 S L8,L13

FILE 'HCAPLUS' ENTERED AT 10:29:56 ON 04 MAR 2008
L15      7 S L14
L16      1 S L15 AND L1-L6
L17      5 S L15 AND PY<=2003 NOT P/DT
L18      2 S L15 AND (PD<=20030802 OR PRD<=20030802 OR AD<=20030802) AND P
L19      7 S L16-L18

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L20      1 S L14

FILE 'REGISTRY' ENTERED AT 10:31:45 ON 04 MAR 2008

FILE 'USPATFULL' ENTERED AT 10:32:02 ON 04 MAR 2008

FILE 'HCAPLUS' ENTERED AT 10:32:18 ON 04 MAR 2008
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